Economics Department

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16TH ANNUAL McGRAW-HILL SURVEY OF POLLUTION CONTROL EXPENDITURES, 1983-86

American business plans to decrease its capital investment in pollution control equipment by 4.9% this year to $9 billion (Table I). These plans represent an inflation-adjusted decrease of close to 10%. In comparison, plans for total business spending on capital goods is expected to drop 1.3% in 1983, according to McGraw-Hill's annual spring survey of plant and equipment expenditures.

If realized, the planned decrease in purchases of equipment used to combat air, water, and solid waste pollution would mark the second consecutive yearly decline. In 1982, pollution control expenditures fell to $9.39 billion from $9.56 billion in 1981. This year, the decline is somewhat steeper. Moreover, projected 1983 outlays are well below the peak $10.9 billion reached in 1977.

If the current 1983 investment target is met, the proportion of capital investment allocated to pollution control equipment would fall, continuing a trend that began seven years ago. In 1983, business estimates that 2.9% of capital spending will be devoted to pollution control equipment, compared to 3.0% last year and a high of 5.6% in 1976 (Tables III and VI).

These are some of the major findings of the 16th annual McGraw-Hill survey of firms' plans to purchase pollution control equipment. The survey, conducted during March and April, drew

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responses from 450 companies, accounting for one-third of the nation's capital expenditures. However, the figures provided represent spending for entire industries, not just for those companies that responded to the survey.

One conclusion to be drawn from the survey is that investment in pollution abatement equipment is becoming less of a priority for U.S. business. Because the 1981-1982 recession forced sharp cutbacks in all discretionary capital spending, it should come as no surprise that pollution control spending has taken some lumps. In addition, since the election of President Reagan, environmental regulation has ceased to mount.

The survey also shows that pollution control equipment spending is expected to continue to decline in relative importance over the next few years. During the period from 1984 to 1986, planned pollution control expenditures average $8.5 billion per year, only about 2.4% of all capital spending plans. If realized, that would be the lowest allocation of capital spending to pollution control equipment since 1969.

Part of the increase in the proportion of spending devoted to pollution control during the early and mid-1970s resulted from industry's bringing plants in line with the then newly enacted Clean Air Act and other environmental regulations. By now, however, industry has closed the gap between its environmental practices and those required by governmental regulation. Therefore, even if there is no relaxation of existing regulations, pollution control expenditures would likely continue to decline in importance relative to total capital spending.

Industry and Sector Spending

As usual, the largest capital expenditures for pollution control equipment are planned by the electric utilities. In 1983, $2.5 billion in expenditures are planned. However, that planned spending is 14.2% lower than electric utilities spent on pollution control equipment in 1982. Since electric utilities are by far the largest pollution control equipment spenders, that 14% decline plays a large role in explaining the decline in total pollution control expenditures. In fact, excluding electric utilities, business projects only a 0.5% expenditure decline.

For 1983, the only other industry with a pollution control capital budget above $1 billion is the petroleum industry. Like the electric utilities though, the petroleum industry has also planned a sharp cutback in pollution control capital spending. Other industries with a large share of their capital budgets going to pollution control equipment (Table III) include nonferrous metals (11.3%), paper and pulp (8.7%) and other nondurables (8.3%).

Manufacturers plan to decrease their pollution control capital spending significantly less than do nonmanufacturers. Manufacturers plan to reduce their spending by only 0.2% while nonmanufacturers plan to spend 9.8% less in 1983. Of the various nonmanufacturing industries surveyed, only railroads, gas utilities, and trade and services plan to increase spending.

The largest percentage increase in pollution control expenditures planned in 1983 is by the autos, trucks, and parts industry, up 255%. But the increase is from a very small base. Other large percentage increases were reported by stone, clay, and glass (91.4%), paper and

pulp (75.7%), and other nondurables (65.1%).

At the same time, several industries planned sharp cutbacks in pollution control investment. The largest decline was reported by the iron and steel industry, down by 50.5%. Other large declines were in the food and beverage industry (-25.3%), mining (-25.7%), and airlines (-25.0%).

Air, Water Solid Waste Spending

As in the past, the lion's share of pollution control expenditures in 1983 will go to equipment used to reduce air pollution. However, the importance of air pollution expenditures is declining relative to spending on water pollution and solid waste disposal. In 1983, plans for air pollution abatement spending represent 44.1% of all planned pollution control capital spending. In 1982, air pollution spending was over 49% of the total. In all, planned air pollution capital expenditures are 14.4% lower than 1982 (Table II).

While spending on equipment to combat air pollution has declined, increases in spending are planned for spending on equipment to control water and solid waste pollution. Next year's targets call for water pollution control expenditures to be up 1.1% and solid waste pollution control expenditures to be up 12.1%. Over the next few years, business expects to spend more on solid waste control equipment, while investing less in air and water pollution control.

Much of the increase in water pollution expenditures can be attributed to large spending increases by a few industries-- paper and pulp (82.8%), stone clay and glass (209.1%), and railroads(46.8%).

Large increases in solid waste pollution control equipment are projected by the autos, trucks and parts industry, paper and pulp, and stone clay and glass.

Given these projected increases, water pollution control equipment's share in total pollution abatement investment should rise to 36.8% in 1983, compared to 34.7% last year. The share is expected to rise to 37.2% in 1984 through 1986. For solid waste expenditures, the projected share for 1983 is 19.1%, versus 16.3% in 1982, rising to 22.4% in 1984-1986.

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NOTE: The other durables category listed in the tables includes lumber, furniture, jewelry, toys, and transportation equipment other than autos and aerospace. Other nondurables includes apparel, tobacco, printing and publishing, and leather.

TABLE I

INVESTMENT FOR POLLUTION CONTROL
(Millions of Dollars)

INDUSTRY	Actual 1982	Planned 1983	% Change 1982-83	Planned 1984-85 (Annual Average)
Iron & Steel	$ 289	$ 143	-50.5%	$ 248
Nonferrous Metals	219	200	-8.7	251
Electrical Machinery	236	245	3.8	317
Machinery	197	173	-12.2	318
Autos, Trucks & Parts	20	71	255.0	140
Aerospace	128	153	19.5	164
Fabricated Metals	45	62	37.8	50
Instruments	96	127	32.3	262
Stone, Clay & Glass	81	155	91.4	192
Other Durables	154	171	11.0	220
TOTAL DURABLES	1,465	1,500	2.4	2,162
Chemicals	954	794	-16.8	1,268
Paper & Pulp	313	550	75.7	359
Rubber	76	62	-18.4	96
Petroleum	1,252	1,038	-17.1	473
Food & Beverages	530	396	-25.3	370
Textiles	63	70	11.1	70
Other Nondurables	358	591	65.1	339
TOTAL NONDURABLES	3,546	3,501	-1.3	2,975
ALL MANUFACTURING	5,011	5,001	-0.2	5,137
Mining	561	417	-25.7	404
Railroads	184	257	39.7	250
Airlines	140	105	-25.0	75
Electric Utilities	2,889	2,479	-14.2	1,766
Gas Utilities	23	25	8.7	32
Communications & Other	191	170	-11.0	220
Trade & Services	394	499	26.6	620
ALL NONMANUFACTURING	4,382	3,952	-9.8	3,367
ALL BUSINESS	9,393	8,953	-4.9	8,504

TABLE II

POLLUTION CONTROL EXPENDITURES - AIR, WATER, AND SOLID WASTE
(Millions of Dollars)

INDUSTRY	1982 Air	1982 Water	1982 Solid Waste	1983 Planned Air	1983 Planned Water	1983 Planned Solid Waste	% Change, 1982-83- Air	% Change, 1982-83- Water	% Change, 1982-83- Solid Waste	Planned 1984-86 Annual Average Air	Planned 1984-86 Annual Average Water	Planned 1984-86 Annual Average Solid Waste
Iron & Steel	$ 151	$ 133	$ 5	$ 86	$ 53	$ 4	-43.0%	-60.2%	-20.0%	$ 99	$ 143	$ 6
Nonferrous Metals	35	150	34	35	136	29	0	-9.3	-14.7	27	191	33
Electrical Machinery	55	137	44	70	121	54	27.3	-11.7	22.7	109	137	71
Machinery	94	87	16	49	100	24	-47.9	14.9	50.0	147	141	30
Autos, Trucks & Parts	9	9	2	35	9	27	288.9	0	1,250.0	106	12	22
Aerospace	39	50	39	39	47	67	0	6.0	71.8	43	53	68
Fabricated Metals	10	27	8	9	41	12	-10.0	51.9	50.0	12	25	13
Instruments	27	46	23	36	59	32	33.3	28.3	39.1	78	110	74
Stone, Clay & Glass	42	22	17	48	68	39	14.3	209.1	129.4	78	57	57
Other Durables	70	50	34	72	56	43	2.9	12.0	26.5	124	45	51
TOTAL DURABLES	532	711	222	479	690	331	-10.0	-3.0	49.1	823	914	425
Chemicals	438	340	176	309	291	194	-29.5	-14.4	10.2	416	667	185
Paper & Pulp	103	134	76	165	245	140	60.2	82.8	84.2	151	105	103
Rubber	32	30	14	22	23	17	-31.3	-23.3	21.4	38	32	26
Petroleum	654	494	104	401	529	108	-38.7	7.1	3.8	164	185	124
Food & Beverages	180	180	170	159	130	1,017	-11.7	-27.8	-37.1	122	136	112
Textiles	31	23	9	30	28	12	-3.2	21.7	33.3	27	26	17
Other Nondurables	238	60	60	442	75	74	85.7	25.0	23.3	169	85	85
TOTAL NONDURABLES	1,676	1,261	609	1,528	1,321	652	-8.8	4.8	7.1	1,087	1,236	652
ALL MANUFACTURING	2,208	1,972	831	2,007	2,011	983	-9.1	2.0	18.3	1,910	2,150	1,077
Mining	162	218	181	47	211	159	-71.0	-3.2	-12.2	49	223	132
Railroads	29	126	29	36	185	36	24.1	46.8	24.1	51	148	51
Airlines	90	25	25	43	31	31	-52.2	24.0	24.0	39	18	18
Electric Utilities	1,879	775	235	1,577	689	213	-16.1	-11.1	-9.4	1,094	427	245
Gas Utilities	0	6	17	0	6	19	0	0	11.8	0	8	24
Communications & Other	85	85	21	80	80	10	-5.9	-5.9	-52.4	104	104	12
Trade & Services	156	48	190	157	79	263	0.6	64.6	38.4	191	85	344
ALL NONMANUFACTURING	2,401	1,283	698	1,940	1,281	731	-19.2	-0.2	4.7	1,528	1,013	826
ALL BUSINESS	4,609	3,255	1,529	3,947	3,292	1,714	-14.4	1.1	1	3,438	3,163	1,903

TABLE III

POLLUTION CONTROL EXPENDITURES AS PERCENT OF CAPITAL SPENDING

INDUSTRY	Actual 1982	Planned 1983	Planned 1984-86 (Annual Average)
Iron & Steel	8.3%	5.7%	6.3%
Nonferrous Metals	8.1	11.3	10.1
Electrical Machinery	2.2	2.1	2.0
Machinery	1.5	1.4	1.9
Autos, Trucks & Parts	0.3	0.8	1.3
Aerospace	2.1	2.3	2.5
Fabricated Metals	1.7	2.3	1.8
Instruments	4.1	4.4	7.0
Stone, Clay & Glass	3.1	5.6	6.0
Other Durables	2.9	3.6	3.6
TOTAL DURABLES	2.6	2.7	3.0
Chemicals	7.2	6.5	8.9
Paper & Pulp	5.2	8.7	5.9
Rubber	4.4	3.1	3.8
Petroleum	4.7	4.2	1.6
Food & Beverages	6.8	5.3	4.6
Textiles	4.7	5.5	5.6
Other Nondurables	5.5	8.3	4.2
TOTAL NONDURABLES	5.6	5.7	4.3
ALL MANUFACTURING	4.2	4.2	3.6
Mining	3.6	3.3	2.8
Railroads	4.2	5.5	4.0
Airlines	3.6	3.0	3.1
Electric Utilities	8.6	7.1	5.6
Gas Utilities	0.3	0.4	0.4
Communications & Other	0.4	0.4	0.4
Trade & Services	0.5	0.6	0.6
ALL NONMANUFACTURING	2.2	2.0	1.5
ALL BUSINESS	3.0	2.9	2.4

TABLE IV

TOTAL POLLUTION CONTROL EXPENDITURES--HISTORICAL
(Millions of Dollars)

INDUSTRY	1967	1968	1969	1970	1971	1972	1973	1974	1975
Iron & Steel	$ 114	$ 105	$ 154	$ 168	$ 163	$ 132	$ 146	$ 180	$ 450
Nonferrous Metals	44	16	39	96	105	148	234	580	597
Electrical Machinery	31	95	52	80	70	79	130	89	132
Machinery	30	61	54	132	107	123	167	214	114
Autos, Trucks & Parts	114	53	99	128	162	198	429	456	191
Aerospace	13	23	35	25	30	42	87	30	77
Other Transportation Equipment	7	15	39	36	30	15	41	67	31
Fabricated Metals	26	46	43	52	85	104	130	109	213
Instruments	6	15	30	31	72	28	33	57	58
Stone, Clay & Glass	46	42	63	68	124	129	142	287	292
Other Durables	64	76	134	177	117	99	164	247	182
TOTAL DURABLES	495	547	742	993	1,065	1,097	1,705	2,316	2,337
Chemicals	92	109	135	166	268	368	432	472	679
Paper & Pulp	89	79	147	162	266	340	454	480	653
Rubber	7	10	9	49	43	60	96	47	56
Petroleum	97	159	242	310	469	513	594	526	1,228
Food & Beverages	41	22	61	100	127	171	228	536	213
Textiles	8	11	14	18	30	28	36	59	80
Other Nondurables	61	28	49	103	20	110	78	53	32
TOTAL NONDURABLES	395	418	657	908	1,223	1,590	1,918	2,173	2,941
ALL MANUFACTURING	890	965	1,399	1,901	2,288	2,687	3,623	4,489	5,278
Mining	55	49	99	108	75	147	252	323	500
Railroads	NA	NA	NA	31	21	27	47	51	58
Airlines	NA	NA	NA	20	10	52	194	178	23
Other Transportation	0	0	0	7	144	23	63	75	360
Communications	0	0	0	*	*	215	422	1,118	305
Electric Utilities	146	231	154	401	540	1,074	1,140	1,181	1,515
Gas Utilities	81	25	130	108	48	43	45	70	43
Trade & Services	0	0	0	179	445	480	592	860	555
ALL NONMANUFACTURING	282	305	383	854	1,283	2,061	2,755	3,856	3,357
ALL BUSINESS	1,172	1,270	1,782	2,755	3,571	4,748	6,378	8,345	8,637

NA - Not Available
* Less than $500,000

TABLE IV

TOTAL POLLUTION CONTROL EXPENDITURES--HISTORICAL
(Millions of Dollars)
(Continued)

INDUSTRY	1976	1977	1978	1979	1980	1981
Iron & Steel	$ 620	$ 466	$ 436	$ 615	$ 503	$ 415
Nonferrous Metals	402	547	253	182	247	234
Electrical Machinery	176	126	193	204	198	132
Machinery	227	435	281	231	200	357
Autos, Trucks & Parts	174	221	303	677	701	150
Aerospace	76	66	97	58	37	138
Other Transportation Equipment**	52	41	66	---	---	---
Fabricated Metals	250	144	150	119	99	70
Instruments	62	41	64	95	72	128
Stone, Clay & Glass	168	164	260	142	193	157
Other Durables	167	146	166	228	202	334
TOTAL DURABLES	2,374	2,397	2,269	2,571	2,452	2,115
Chemicals	999	855	651	744	961	900
Paper & Pulp	799	468	315	438	458	328
Rubber	75	195	120	102	49	63
Petroleum	808	1,053	753	1,151	877	1,355
Food & Beverages	350	266	376	218	200	342
Textiles	132	76	108	132	85	77
Other Nondurables	51	139	103	124	173	55
TOTAL NONDURABLES	3,214	3,052	2,426	2,909	2,803	3,120
ALL MANUFACTURING	5,588	5,449	4,695	5,480	5,255	5,235
Mining	513	1,617	1,092	182	194	983
Railroads	32	55	56	64	158	81
Airlines	21	37	31	112	75	3
Other Transportation**	253	97	74	72	--	--
Communications	352	242	318	309	80	164
Electric Utilities	2,156	2,356	2,143	2,959	2,592	2,956
Gas Utilities	127	173	69	44	*	*
Trade & Services	641	906	1,192	1,158	834	142
ALL NONMANUFACTURING	4,095	5,483	4,975	4,900	3,933	4,329
ALL BUSINESS	9,683	10,932	9,670	10,380	9,188	9,564

NA - Not Available
* Less than $500,000
** As of 1979, other transportation equipment is included in other durables. As of 1980, other transportation services are included with communications.

TABLE V

HISTORICAL POLLUTION CONTROL EXPENDITURES -- AIR WATER, SOLID WASTE
(Millions of Dollars)

INDUSTRY	1970 Air	1970 Water	1971 Air	1971 Water	1972 Air	1972 Water	1973 Air	1973 Water
Iron & Steel	$ 70	$ 98	$ 84	$ 79	$ 71	$ 61	$ 65	$ 81
Nonferrous Metals	77	19	78	27	123	25	199	35
Electrical Machinery	38	42	36	34	37	42	59	71
Machinery	89	43	70	37	64	59	92	75
Autos, Trucks & Parts	86	42	101	61	117	81	236	193
Aerospace	15	10	22	8	24	18	54	35
Other Transportation Equipment	29	7	22	8	12	3	32	9
Fabricated Metals	25	27	65	20	64	40	51	79
Instruments	22	9	30	42	10	18	21	12
Stone, Clay & Glass	41	27	94	30	81	48	94	48
Other Durables	76	101	53	64	73	26	111	53
TOTAL DURABLES	568	425	655	410	676	421	1,014	691
Chemicals	78	88	118	150	159	209	174	258
Paper & Pulp	62	100	126	140	182	158	294	160
Rubber	31	18	20	23	30	30	69	27
Petroleum	140	170	250	219	340	173	379	215
Food & Beverages	45	55	54	73	83	88	120	108
Textiles	6	12	8	22	13	15	13	23
Other Nondurables	7	96	12	8	58	52	65	13
TOTAL NONDURABLES	369	539	588	635	865	725	1,114	804
ALL MANUFACTURING	937	964	1,243	1,045	1,541	1,146	2,128	1,495
Mining	69	39	36	39	97	50	194	58
Railroads	23	8	8	13	8	19	23	24
Airlines	17	3	10	*	48	4	194	0
Other Transportation	5	2	83	61	10	13	54	9
Communications	*	*	*	*	72	143	211	211
Electric Utilities	253	148	319	221	856	218	795	345
Gas Utilities	74	34	26	22	24	19	24	21
Trade & Services	90	89	274	171	280	200	500	92
ALL NONMANUFACTURING	531	323	756	527	1,395	666	1,995	760
ALL BUSINESS	1,468	1,287	1,999	1,572	2,936	[illegible]	4,123	2,255

* Less than $500,000

TABLE V

HISTORICAL POLLUTION CONTROL EXPENDITURES -- AIR WATER, SOLID WASTE
(Millions of Dollars)
(Continued)

INDUSTRY	1974		1975			1976		
	Air	Water	Air	Water	Solid Waste	Air	Water	Solid Waste
Iron & Steel	$ 104	$ 76	$ 199	$ 172	$ 79	$ 428	$ 188	$ 4
Nonferrous Metals	400	180	468	54	75	323	41	38
Electrical Machinery	46	43	38	69	25	43	99	34
Machinery	119	95	49	54	11	133	77	17
Autos, Trucks & Parts	254	202	67	64	60	109	43	22
Aerospace	19	11	37	29	11	34	27	15
Other Transportation Equipment	67	*	17	7	7	14	9	29
Fabricated Metals	80	29	98	103	12	94	147	9
Instruments	28	29	25	27	6	15	34	13
Stone, Clay & Glass	180	107	162	70	60	129	31	8
Other Durables	158	89	138	35	9	94	56	17
TOTAL DURABLES	1,455	861	1,298	684	355	1,416	752	206
Chemicals	207	265	259	329	91	292	601	106
Paper & Pulp	284	196	405	239	9	258	419	122
Rubber	20	27	30	15	11	49	25	1
Petroleum	365	161	691	345	192	453	313	42
Food & Beverages	133	403	92	96	25	120	148	82
Textiles	33	26	26	42	12	26	88	18
Other Nondurables	33	20	23	8	1	20	21	10
TOTAL NONDURABLES	1,075	1,098	1,526	1,074	341	1,218	1,615	381
ALL MANUFACTURING	2,530	1,959	2,824	1,758	696	2,634	2,367	587
Mining	202	121	291	135	74	348	106	59
Railroads	16	35	11	41	6	6	23	3
Airlines	166	12	10	12	1	16	4	1
Other Transportation	43	32	199	111	50	140	93	20
Communications	536	582	87	130	88	48	234	70
Electric Utilities	715	466	999	400	116	1,462	507	187
Gas Utilities	42	28	20	9	14	72	47	8
Trade & Services	526	334	277	139	139	394	148	99
ALL NONMANUFACTURING	2,246	1,610	1,894	977	488	2,486	1,162	447
ALL BUSINESS	4,776	3,569	4,718	2,735	1,184	5,120	3,529	1,034

* Less than $500,000

TABLE V

HISTORICAL POLLUTION CONTROL EXPENDITURES -- AIR WATER, SOLID WASTE
(Millions of Dollars)
(Continued)

INDUSTRY	1977			1978			1979		
	Air	Water	Solid Waste	Air	Water	Solid Waste	Air	Water	Solid Waste
Iron & Steel	$ 234	$ 182	$ 50	$ 285	$ 148	$ 3	$ 457	$ 157	$ 1
Nonferrous Metals	363	173	11	202	28	23	86	53	43
Electrical Machinery	47	47	32	85	66	42	55	91	58
Machinery	204	204	27	139	109	33	84	140	7
Autos, Trucks & Parts	76	76	69	294	5	4	231	231	235
Aerospace	29	27	10	56	24	17	16	24	18
Other Transportation Equipment**	15	11	15	20	20	26	---	---	---
Fabricated Metals	97	45	2	90	41	19	53	35	31
Instruments	15	22	4	39	21	4	36	33	26
Stone, Clay & Glass	85	49	30	132	70	58	79	42	21
Other Durables	85	38	23	78	33	55	73	75	80
TOTAL DURABLES	1,250	874	273	1,420	565	284	1,170	881	520
Chemicals	277	513	65	251	334	66	299	326	119
Paper & Pulp	191	223	54	155	156	4	200	154	84
Rubber	131	56	8	91	11	18	56	24	22
Petroleum	495	495	63	320	340	93	636	450	65
Food & Beverages	102	133	31	131	163	82	87	93	38
Textiles	33	30	13	37	67	4	13	101	18
Other Nondurables	21	99	19	31	48	24	51	34	39
TOTAL NONDURABLES	1,250	1,549	253	1,016	1,119	291	1,342	1,182	385
ALL MANUFACTURING	2,500	2,423	526	2,436	1,684	575	2,512	2,063	905
Mining	358	1,200	59	494	241	357	60	62	60
Railroads	6	37	12	9	36	11	13	41	10
Airlines	20	13	4	19	8	4	65	29	18
Other Transportation**	56	41	*	34	38	2	33	37	2
Communications	54	162	26	71	213	34	69	207	33
Electric Utilities	1,579	689	88	1,188	883	72	1,808	1,006	145
Gas Utilities	88	83	2	24	36	9	8	34	2
Trade & Services	452	227	227	596	298	298	580	290	290
ALL NONMANUFACTURING	2,613	2,452	418	2,435	1,753	787	2,636	1,700	560
ALL BUSINESS	5,113	4,875	944	4,871	3,437	1,362	5,148	3,763	1,465

* Less than $500,000
** As of 1979, other transportation equipment is included in other durables. As of 1980, other transportation services are included with communications.

TABLE V

HISTORICAL POLLUTION CONTROL EXPENDITURES -- AIR WATER, SOLID WASTE
(Millions of Dollars)
(Continued)

INDUSTRY	1980 Air	1980 Water	1980 Solid Waste	1981 Air	1981 Water	1981 Solid Waste
Iron & Steel	$ 314	$ 155	$ 35	$ 248	$ 147	$ 20
Nonferrous Metals	144	45	58	119	73	42
Electrical Machinery	78	67	52	37	83	12
Machinery	71	127	2	186	162	9
Autos, Trucks & Parts	350	175	176	50	50	50
Aerospace	16	12	9	46	47	45
Other Transportation Equip.	--	--	--	--	--	--
Fabricated Metals	33	58	8	22	29	19
Instruments	36	20	16	34	65	29
Stone, Clay & Glass	111	43	39	92	55	10
Other Durables	111	52	39	134	124	76
TOTAL DURABLES	1,264	754	434	968	835	312
Chemicals	316	428	217	240	473	187
Paper & Pulp	210	187	61	183	141	4
Rubber	8	27	14	26	27	10
Petroleum	388	464	24	653	644	58
Food & Beverages	48	78	74	134	142	66
Textiles	35	29	21	30	34	13
Other Nondurables	59	57	57	18	18	19
TOTAL NONDURABLES	1,064	1,270	468	1,284	1,479	357
ALL MANUFACTURING	2,328	2,024	902	2,252	2,314	669
Mining	125	10	59	297	451	235
Railroads	5	63	90	33	30	18
Airlines	27	28	20	1	1	1
Other Transportation**	--	--	--	--	--	--
Electric Utilities	1,394	947	252	2,107	618	231
Gas Utilities	*	*	*	*	*	*
Communications & Other	36	34	11	43	106	15
Trade & Services	209	317	309	29	24	89
ALL NONMANUFACTURING	1,796	1,399	741	2,510	1,230	589
ALL BUSINESS	4,124	3,423	1,643	4,762	3,544	1,258

* Less than $500,000
NA - Not Applicable

TABLE VI

POLLUTION CONTROL EXPENDITURES AS A PERCENT OF CAPITAL SPENDING--HISTORICAL
(Percent)

INDUSTRY	1967	1968	1969	1970	1971	1972	1973	1974	1975**	1976
Iron & Steel	6.0%	5.2%	8.4%	10.3%	12.8%	12.3%	11.7%	9.3%	14.9%	20.4%
Nonferrous Metals	4.0	1.4	3.7	8.1	10.3	15.3	18.0	28.3	27.5	20.4
Electrical Machinery	1.0	3.0	1.6	2.3	2.3	2.8	3.7	2.3	4.2	4.8
Machinery	1.0	2.1	1.5	3.5	3.4	3.8	4.2	4.1	2.3	4.1
Autos, Trucks & Parts	4.0	2.0	3.3	4.2	6.7	6.6	11.2	10.6	5.7	4.8
Aerospace	1.0	1.9	2.7	2.8	4.7	6.2	10.2	2.0	4.6	4.5
Other Transportation Equipment	2.1	4.4	5.4	5.0	6.2	2.0	4.3	6.4	3.5	4.8
Fabricated Metals	2.0	3.4	3.5	4.3	7.1	7.3	7.2	5.6	10.8	11.2
Instruments	0.9	2.0	3.5	3.6	9.0	3.2	2.9	4.8	5.5	5.5
Stone, Clay & Glass	5.0	4.7	5.9	6.4	13.2	9.6	9.0	17.5	17.6	9.0
Other Durables	4.9	5.0	7.0	9.2	6.4	4.8	6.5	9.0	7.5	6.3
TOTAL DURABLES	2.8	3.1	3.7	5.0	6.3	6.0	7.5	8.4	8.9	8.3
Chemicals	3.0	3.9	4.5	4.9	8.2	10.9	10.2	7.3	8.9	12.3
Paper	6.0	6.2	9.1	9.3	20.6	23.3	22.8	16.6	21.9	25.7
Rubber	1.0	1.0	0.8	5.3	5.4	5.8	6.2	3.0	4.8	5.7
Petroleum	2.0	3.2	4.6	6.0	9.0	10.7	12.7	7.2	12.8	7.5
Food & Beverages	2.0	1.0	2.2	3.0	3.8	5.2	6.3	13.3	5.3	7.3
Textiles	1.0	1.7	1.6	2.3	3.3	2.6	3.5	5.4	8.9	12.6
Other Nondurables	4.0	1.8	2.8	5.5	1.0	5.0	3.1	2.2	1.4	2.2
TOTAL NONDURABLES	2.7	2.9	4.0	5.3	7.3	9.2	9.8	8.4	10.3	10.2
ALL MANUFACTURING	2.8	3.0	3.9	5.1	6.8	7.6	8.9	8.4	9.6	9.3
Mining	4.0	3.4	5.6	6.1	2.8	5.1	7.6	7.0	8.2	6.9
Railroads	NA	NA	NA	1.6	1.2	1.6	2.2	1.9	2.0	1.1
Airlines	NA	NA	NA	0.7	0.7	2.4	9.3	9.2	1.4	1.8
Other Transportation	0.0	0.0	0.0	0.3	5.3	0.8	2.0	2.1	8.6	5.2
Communications	0.0	0.0	0.0	0.0	*	2.4	2.0	4.8	1.4	1.5
Electric Utilities	2.0	2.9	1.7	3.8	4.4	7.9	7.6	7.1	9.1	11.5
Gas Utilities	4.0	1.0	4.9	4.4	2.0	1.6	1.5	2.2	1.3	3.5
Trade & Services	0.0	0.0	0.0	0.6	1.3	1.2	1.3	1.8	1.2	1.3
ALL NONMANUFACTURING	0.6	0.5	0.6	1.2	1.7	2.4	2.9	3.7	3.3	3.7
ALL BUSINESS	1.4	1.4	1.8	2.6	3.3	3.9	4.6	5.3	5.5	5.6

NA - Not Available
* Less than .05%
**Solid waste is included starting in 1975.

TABLE VI

POLLUTION CONTROL EXPENDITURES AS A PERCENT OF CAPITAL SPENDING--HISTORICAL
(Percent)
(Continued)

INDUSTRY	1977	1978	1979	1980	1981
Iron & Steel	16.7%	17.3%	19.9%	15.3%	13.1%
Nonferrous Metals	29.1	12.0	7.6	8.0	6.8
Electrical Machinery	2.7	3.4	2.8	2.1	1.3
Machinery	6.6	3.9	2.2	1.7	2.7
Autos, Trucks & Parts	3.8	4.2	8.4	7.7	1.5
Aerospace	3.3	3.0	1.1	0.5	2.1
Other Transportation Equipment**	3.3	4.2	--	--	--
Fabricated Metals	5.8	5.2	3.9	3.3	2.4
Instruments	3.0	4.0	5.4	3.2	5.6
Stone, Clay & Glass	7.3	8.4	3.6	5.1	5.0
Other Durables	4.9	5.0	4.0	3.3	4.9
TOTAL DURABLES	7.0	5.6	5.0	4.2	3.4
Chemicals	10.5	7.7	6.9	7.6	6.6
Paper	13.0	7.9	7.9	6.7	4.9
Rubber	11.8	5.7	4.7	2.8	3.6
Petroleum	8.3	5.4	7.1	4.2	5.1
Food & Beverages	5.2	6.3	3.3	2.7	4.2
Textiles	6.0	7.8	8.8	5.2	4.9
Other Nondurables	5.1	3.0	2.6	2.9	0.8
TOTAL NONDURABLES	8.7	6.2	6.1	5.0	4.8
ALL MANUFACTURING	7.9	5.9	5.6	4.5	4.1
Mining	17.5	10.7	1.6	1.4	5.8
Railroads	1.8	1.6	1.6	3.7	1.9
Airlines	1.7	1.0	2.8	1.9	*
Other Transportation***	2.3	1.8	--	--	--
Electric Utilities	10.6	8.7	10.7	9.2	9.9
Gas Utilities	3.8	1.3	0.7	*	*
Communications & Trade & Services	1.3	1.5	1.3	0.7	0.2
ALL NONMANUFACTURING	4.3	3.3	2.9	2.1	2.2
ALL BUSINESS	5.5	4.2	3.8	3.1	3.0

NA - Not Available
* Less than 0.5%
** Solid waste is included starting in 1975.
*** As of 1979 other transportation equipment is included in other durables and other transportation services are included with communications and commercial.